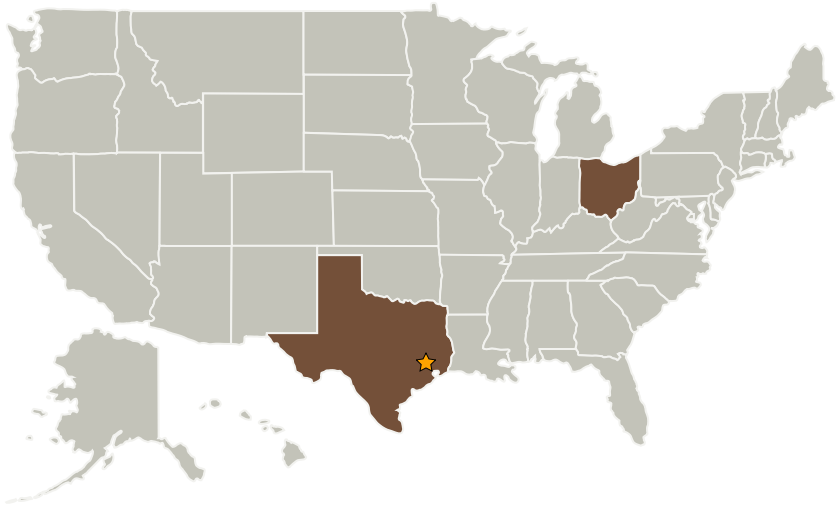
Lunar Health Monitor, Phase I

Completed Technology Project (2007 - 2007)

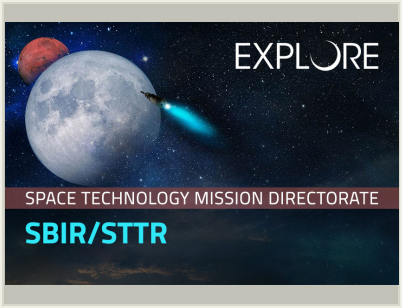
Project Introduction

Orbital Research has successfully demonstrated a dry electrode (no electrolyte or gel required) for heart rate and ECG monitoring. Preliminary data has indicated that the electrode can be incorporated into a garment that does not require an adhesive for successful data collection. Further preliminary data indicates that respiration rate can be deduced from the ECG waveform captured from the dry electrodes. The Orbital Lunar Health Monitor (LHM) will incorporate the patented dry electrode with other commercially available sensors in a garment resulting in fully wearable monitor of Astronaut Health. The data from each of the sensor is processed, yielding a comprehensive image of overall health. Environment sensors are also incorporated to detect longer term health threats. The LHM is comfortable and non-inhibiting. The Orbital Lunar Health Monitor is intended to enable continuous monitoring of health status of Astronauts both in intra- and extra-vehicular sorties.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Orbital Research, Inc.	Supporting Organization	Industry	Cleveland, Ohio



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
Ohio	Texas

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.4 Contact-less / Wearable Human Health and Performance Monitoring